

CHAIR AND TABLE

I was asked to write on a fairly simple subject: the studio as instrument. My first tendency was to question the role played by sound engineering in the creation of electronic and electroacoustic music. That seemed simple enough but, at this point, the question of where engineering begins and where composing ends is so hazy that each plays an important role in reassuring the other, in a never-ending crosstalk. How did my fascination with the recording studio even begin? I can trace back my initial introduction to the electronic music I love not so much to John Cage's *Cartridge Music* or even to Stockhausen's *Gesang der Jünglinge*, but to Frank Zappa's *Uncle Meat* and to interviews I read with Pete Townsend. Critically, both of these sparked two seemingly unrelated areas of interest: creating music *with* tape, and being a record producer.

At first, these seemed like unrelated paths, especially as home recording on the "professional" level had yet to become a reality. Making tape music would be a solitary effort with razorblade in hand, while using the *studio* was a hopeful future.

I was fascinated by the tangible way in which Zappa did not just use the studio as a documentation of performance, but how fully integrated the music was with tape manipulation and radical mixing. I loved reading about the recording methods used to create sounds I had never heard before, especially Tom Scholz's radical techniques to create behemoth-sized sounds in his basement, just like where my little studio was! Elsewhere, George Roy Baker was using a forty-track (what was *that?*) to create the layer-cake-thick chorused sound of the first Cars record and Queen's *Killer Queen*. (In one alternate reality, Paul Dolden and Phill Niblock got their techniques from an issue of *Sound & Recording* with Baker on the cover.)

Simultaneously, I would drool over pictures of any European electronic music studio I could find, INA GRM, NDR, WDR, Columbia-Princeton, and especially Leo Kupper's GAME.

These were huge, giant, building-sized dreams that seemed out of reach. This was not studio as instrument, but studio as *home*. In my case the two paths separated into private and public, but they are always intermingled. What is considered rote in one is sacrilege in another, but a knowledge of both working methods doesn't just add to the possibilities, it multiplies them. Just like any instrument, in order to get better you have to practice. Recording equipment is a two-way street, and the options on the panel aren't the only route. Trial and error are essential to learning the character of every stage of the studio, the microphones, the preamps, the compressors; they all interrelate and cast shade on each other. Keeping a balance between research and hands-on experience is essential to seeing

every aspect from a different standpoint, which in turn unveils new positions you may not have seen before.

For all the time spent reading a treatise on Karplus-Strong, sitting in front of a bass drum during a sound check, with its incessant boom...boom...boom... may teach you just as much. Our ears are microphones that have the advantage of being linked to eyes and hands. To take just one example, years of thinking and applying ideas to miking drums has taught me so much that can be used in creating electronic music. I can think of one example in particular where the two worlds of thought have intersected, to the bafflement of others. While producing Wilco's *Yankee Hotel Foxtrot*, one of the few times where I was not the head engineer, I asked the assistant engineer to mic up the hi-hat in the way that I had come to rely on. Usually, a hypercardioid mic is aimed at the hi-hat's top half from above, and it is a reliable method, especially in live sound situations (another completely different aspect of this conversation, and also worth exploring). My approach was more to think of the drums as a group of sound objects which from a distance comprise a totality, but in a close miking situation must each be approached according to its own character. The hi-hat is one of the most inscrutable: like the bass drum, it displaces air in a relatively forceful way. Each time the pedal is depressed, not only do you have the meeting of metal halves, but a geyser of escaping air from all sides. Striking the hi-hat also sets in motion all manner of interactions between the cymbals, depending on location, force, and something close to a keyboard's aftertouch, the push and pull of the body of the stick after initial contact. Making a "sound map" of the instrument, using your ears everywhere,

keeping in mind that microphones react to air pressure differently, the environment around the hi-hat—all of these need to come into play when deciding what mic and where. In this one case, my method seems to the eye counterintuitive: the mic actually points away from the set and is placed perpendicular to the hi-hat, about six inches away from where the two halves meet. It may have confused the engineer's eye, but not his ears: everything was balanced and even, with very little bleed from the snare or overhead cymbal.

The point of this is that my experience in synthesis and electroacoustic music helped me approach such problems from a different perspective, but it also went hand-in-hand with what I had learned from great recording engineers, study, and experience. This meeting place between the two creates an infinite set of possibilities, with one hand helping the other.

It is now more possible than ever to occupy this space. Recording equipment is affordable, access to writings and examples of all of these aspects are available freely. It costs nothing to study, your hands are free to move that mic as many times you want. But the most important part of using the studio has never changed: those two mics on opposite sides of that thing in your skull. Getting them to work together and to push each other is the greatest studio of all.

TIME IS OF NO IMPORTANCE

Time is of no importance. All that counts is the duration necessary for a seamless development. My music evolves organically. It's like a plant. We never see a plant move, but it is growing continually. Like plants, immobile but always growing, my music is never stable. It is ever changing. But the changes are so slight that they are almost imperceptible, and only become apparent after the fact. This music, as I conceive of it, cannot contain any breaks. So the structure is very simple, based on the use of fades—fade in, fade out, and crossfade. Incidentally, when I used to do these fades by hand, using tape recorders, the result seemed far subtler than the digital fades that are used today, which to me seem too mechanical.

I learnt to work with tape and tape recorders alongside Pierre Schaeffer and Pierre Henry, leaving serialism behind to instead immerse myself in the universe of sounds. With Pierre Henry in particular, I learnt to work with feedback and reinjection. What I've retained from that apprenticeship is the concentration and the slowness that is necessary for a subtle manipulation of potentiometers and microphones. With feedback, you

have to walk this invisible line, this slight movement of the microphone (too close and everything blows up, too far and it dies out). With the right distance, the right gesture, I was able to generate sustained, gently vibrating and undulating sounds. Similarly, I used feedback by reinjection, moving the playback or recording potentiometer ever so slightly to produce a tiny variation, an imperceptible shift. I intervened very little. I just let the sound evolve, so as to learn how to listen and to try and find out how it spoke to me. Once I had *heard* it, I could, in some sense, open up a conversation with it. Trying to listen to it and to respect it for itself.

This contemplative listening relationship to sound is something I've always cultivated. I remember how, when I lived near Nice airport, throughout the day I used to listen to the few planes that flew out of there, trying to make out the variations in their rumbling. The ear has the ability to navigate within a sound mass and, within the continuum of this rumbling, I looked for a music. The sonic landscapes of the Nice region were inexhaustible. One of my first works, *Elemental*, was composed from recordings I made with a little Stellavox tape recorder. I had recorded sounds of the sea, the wind, rain, landslides. And it was in Pierre Henry's studio that I used these elements to compose the first *Elemental*.

Later I discovered electronic sounds and synthesizers, but I have always continued to apply the techniques learnt in *musique concrète* studios. So my music develops out of two primordial elements: a contemplative, deep, and extremely attentive listening, and a methodology inherited from my long hours working in the studio with magnetic tape and tape recorders. Discovering the

techniques of montage, mixing, and transformation, I developed an instrumentation that suited my music, to which the synthesizer would later be added. Because there was a certain music that I wanted to hear, and I discovered its fundamental principles when I came across these electronic materials that I found so fascinating.

If my music unfolds with a certain slowness, it is for three reasons. Firstly, I have always preferred the slow movements in classical music. Often, when I am listening to a record, I begin directly with the second movement and, once it is finished, rush to take off the record before the scherzo begins. The second reason is that behind each of my pieces there is a story, a reference, an experience to which the work is related. These are either themes I want to address and which need time to unfold, or impressions I have felt, experiences I have lived through, and which I evoke with my music. These stories, these states, have their own duration, and must be unfolded within that same duration. The third and final reason relates to something I consider fundamental to my work: the exploration of intermediate states. Everything is an interval, we are always in-between. And in this interval, between two states, there is a continual expression of invisible variations, imperceptible transitions. All in-betweens are fundamental—as illustrated, for example, by the six intermediate states of the *Bardo Thödol*, the *Tibetan Book of the Dead*. In my music, intermediate spaces are like a shoreline transformed by progressive, slow, and continuous changes that come in waves, like the tide.

My work in electronic composition develops slowly—the first steps, anyway. I never begin from nowhere; I have “the story” and the structure in mind. Then I start to

search, making sounds designed for this or that part, in a haphazard way. I take notes, but then I leave it alone for a month or two. Then I listen again to all of the sounds I have collected, eliminate some of them, look at possible ways of putting them together, and I remake new sounds that are in line with those I already have. Then comes the structuring, which I do with the help of a drawn score. Finally it's time for mixing, which is done in one pass, something that calls for extremely close attention, since, if something goes wrong in the fifty-second minute, for example, the whole thing will have to be done again from the beginning.

This extremely close attention, which begins with my own listening and continues in my gestures, on the magnetic tape, is then transmitted through the diffusion of the piece and the listening of the auditor. There is a kind of gradual transfer of energy that permeates, one by one, every one of the steps that produce the musical experience. But every musical experience is always more than musical. It is through music that I encountered Buddhism, but I had always been drawn to spirituality. I see music and spirituality as two rails that carry the same vehicle but remain distinct from one another, and rarely come together (the exception being the *Songs of Milarepa* and *Jetsun Mila*). Both of them however are related to a meditative experience and a progressive and solitary work. In the end, my music is like a mirror that reflects one's inner state and resonates with it. It is in this way that it can offer, to whoever wants to listen, a singular experience of duration.

SOUND MATTERS

I am folding in the waves.

Description of playing Lucier / sensation of playing
sound pressure waves.

Tightrope walk.

Bird on a wire.

Cat on a hunt.

Calm down, it's going to be fine.

There it goes, the time.

Slow music?

Nah, it's just a movement, enjoy the challenge of the
precision.

Slow movement.

Enjoy and enter the focus and concentration.

The tone is gorgeous. Hear how many sounds are in there? How many characters?

Alright, it's clearly electrical energy, activated gas.

Meditative or trance schpiel.

First term wave geometry.

Tracing paper over a double helix.

Front row seat at the Yankees.

Beating: standing wave phenomena.

Beating: wake up the cells.

Beating: watch it move across the stage.

Beating: small backgammon with Greg.

Beating: subs holding it down.

Beating: under or overtone, Who is that?

Beating: damn, that feels good.

Beating: Am I awake? Did I just wake up?

Beating: melting the past/future away.

Beating: Is this real or just a fantasy?

Beating: whoa that one hurt a little.

Beating: there it is, feeling the nourishment of the spirit.

Beating: slowing riding that wave as it crests.

It's first person interjection with surfing fantasies.

Sliding between 450-300 Hz over six or seven minutes and the Criss at D (on a 443Hz A intonation).

They cross there too.

Sonic crossing guard.

Two circles droplets of I.

The wave.

Braids are sprays of beatings more vertically.

Jazz ending.

Tilted arcs spray of photons twin to pretend to ship steel blasted by functionaire psychic annoyances.

Helix a serpentine quantum crossing of a wave calculus gets to the yoga serpent.

Peter Grey's knowledge serpent of femininity liberation touching the universe.

Knowledge of inclusion of universe matter energy.

Paralyzing the body with the serpents' venom in order to take a nap and refresh the mind.

I like this esoteric/cosmic series.

Seeding a desert thunderstorm for a drink of water for a cactus.

O)); my high energy version of a vision.

Solaris, Sunshine.

Arcane pineal cult, imagination blossomed.

Solar energy, the idolatry as old as the ages.

Presence of the weather, it's shaking the corpse of physicality, seething in the mind's eye.

Evergiving.

Golden hats of europe.

Over saturated.

Over over. Over the double rainbow.

More is more. Sanctuary, Nevermore.

Minimalism? Maximalism?

Erase the ism. Add an X. Add 20 Xs.

Go ahead and add that f to Lucier.

He said I love Lucier enough to tattoo it.

Cement truck of oil paint on a canvas.

A 70s high arena rock band Judas Priest's double layer backlines transplanted in front of an altar in a church and cube it.

Lens of the ritual with the climate change cranked as close to absolute zero as possible to gain a few more Hz below the 7-10 Hz infra threshold.

The border of obvious mechanical modulation.

Birds with FM in their voice boxes.

Typhoon of watercolor painting smearing the landscape.

Lubricating strata of a marble quarry to slide off imperfect 100 000 metric ton bricks.

Stoffes from space, the meteors crashing each other in their belt.

Powered by gravity, bending the warps. Deep impacts.

An intention of purely hewn pillar of sound damaged by times embrace of erosion.

Stone imagery is always great.

Lucier drawing over representative images of
geometric postmodern harmonies.

Without knowing results.

Having fun and nutritive in the experience of music
that it's inseparable to it.

But idolised and cherished to overly romanticised
and even misinterpreted as a demagogue level of
sonic ideas.

At play with this work.

Down to earth with his engagement... in certain
ways.

Having fun and... going for an old fashioned joyride.

The world isn't going to end if it doesn't work.

Or will it if it's not completely premeditated or
composed?

Deliberately misdirected use of the word pretentious.

It's just music.

It's just sound.

Whatever... try it again.

Live sound is the experience and the excitement of
that field is inversely to the excitement of scoring.

Double Rainbow, Double Helix. Braid.

Freak accident = O))) in a nutshell.

Amplifier chess.

Distortion Go-Ko.

Obsessive behavior driving exploration deep to
time and tone and deeper inside of the sound and
vibration.

String theory and wave theory blah blah.

Spatialization hot air.

Watts: picks and squiggles goo.

Wave knots.

Deep surf.

Deep parallel.

But there is still a levitation.

And what a pleasure. A true one.

The metaphors, all about the metaphors.